KALAMAZOO COUNTY ENTOMOLOGY PROJECT GUIDELINES

- Projects can be exhibited under ANY category.
- Members may use vegetable boxes, 10" x 16" x 4" or standard exhibit boxes 18" x 24" x 3 1/2" or similar type box.

The statement made at the beginning of Exhibit Guidelines that "projects may be exhibited under any category", gives the member an opportunity to collect if desired, and show his/her scientific study or art form skills all within the same project. With this in mind, the leader and member may expand Entomology into a year around project.

Members should be encouraged to use materials for his/her project that will be lasting and enhance the aesthetic value of his exhibit. However, it is understood that members who have various economic resources and projects submitted shall not be downgraded presented in a neat and orderly fashion.

Member presentation of their project to the judges is expected. If, for example, circumstances beyond his/her control, a member is unable to attend the judging the project superintendent needs to be contacted prior to the judging date and a note of explanation should accompany the exhibit. The note should be composed and written by the member and include the following: 1. Areas of project he/she especially enjoyed, 2. Special areas within the exhibit that he/she is proud of, 3. any extra workshops or special projects that were done or attended in relationship to the project, 4. aspirations for further studies (next year), and 5. any other comment or questions which the member wishes to say to the judge. The member is always encouraged to be at the judging personally. Repeated absences may result in the awarding of "Honorable Mention" only, for his exhibit.

ENTOMOLOGY PROJECT GUIDELINES

Objectives:

- To promote project experience that will increase the member's awareness and appreciation of nature.
- To provide an opportunity for youth to explore the science of Entomology.
- To promote familiarity and skill in use of the Scientific Method.
- To assist the member to understand the necessity of animal classification to understand the intrinsic order of nature.
- To provide an opportunity for members to develop precise work habits, skill in techniques, and the persistence to follow a project through until its completion.
- To encourage a healthy indoor and outdoor experience which will prove beneficial to the development of the member's body and mind.
- To explore decision making and problem solving by learning that alternative solutions to problems do exist.
- To help members discover how to cope with change by evaluating new concepts and putting them into effect.

ENTOMOLOGY GUIDELINES LEARNING ACTIVITIES AND SUGGESTIONS

- Entomology Member Manuals 1, 2, and 3 have been updated in 1986 and 1987. They have excellent activity suggestions relating specifically to the Basic, Science and Skills sections of 4-H Entomology.
- A 4-H Entomology Leaders Guide has been created in 1988 with additions in 1989. It follows the Members Manuals and has had input from 4-H Entomology Volunteers throughout the state. We are proud and fortunate to have such rich resource material available.
- Yearly the 4-H State Developmental Committee on Entomology presents a Workshop for leaders and older members. This workshop is held at one of three sites, Kettunen Center in Tustin, MI., Kellogg Biological Station in our own county, or Tollgate Farms in Novi, Mi. The workshop is an excellent source for leader and member training and sparks enthusiasm, as well. Contact the 4-H office for dates and further information regarding the workshops.

ENTOMOLOGY FAIR EXHIBIT

Section A - Basic Entomology

Refer to project guidelines

CLASS

- Basic Entomology I -
  25 species, 8 different orders
- Basic Entomology II -
  50 species, 11 different orders
- Basic Entomology III -
  100 species, 14 different orders
- Basic Entomology IV -
  150 species, 15 different orders
- Basic Entomology V -
  200 species, 16 different orders
- Basic Entomology VI -
  250 species, 16 different orders
- Basic Entomology VII -
  300 species, 16 different orders
- Basic Entomology VIII -
  350 species, 18 different orders

Section B - Entomology Science
Refer to project guidelines

CLASS

Entomology Science I - Special collections:

- Collect, prepare and preserve 25 different insect immature (nymphs & larvae), OR 25 non-insect arthropods, OR 25 species from a single order...

Entomology Science II - Economic entomology:

- collect, preserve and exhibit 30 different economic insects (pests & beneficials) (adults and/or immatures) and include some information on their relationship to human society.....

Entomology Science III - Entomological

- STUDIES: this can include slides, photos, video recordings, tape recordings, observations, live specimen exhibits, identification demonstration, or drawings.

Entomology Science IV - Entomological

- EXPERIMENTS: this can include experiments in biology, ecology, genetics or behavior of insects...

Entomology Science V - Educational Exhibit:

- field journal should accompany exhibit....

Section C - Entomological Skills

Refer to project guidelines

CLASS

Special Skills I - Illustration:

- prepare at least 5 illustrations (any medium) of insects showing form, habits, life cycle or other interesting information....

Special Skills II - Laminations:

- Prepare at least 20 wing laminations, including a name for each species...

Special Skills III - Plastic Embedment:

- prepare at least 5 plastic embodiments of various insects and/or arthropods and include names of species....

Special Skills IV - Entomology Crafts -

- prepare a craft exhibit using at least 3 insects that have been prepared (mounted/spread) by the member.....

SUGGESTED COLLECTION EVALUATION FEEDBACK

Note to 4-H Member: This information is provided so that you might study the suggestions and comments given below and thereby improve your collection for future years. If you have any questions about these comments, please feel free to discuss them with the judge.

O.K. Needs
Improvement

1. Minimum number of orders:

2. Minimum number of species:

3. Mounting techniques:

a. Location of pins:

b. Height of specimens:

c. Spreading techniques:
d. Pointing techniques:

4. Labeling

a. Labels oriented correctly:

b. Proper spacing on pins:

c. Neatness and legibility

5. Neatness of collection

a. Alignment of rows and columns:

b. Consistent orientation of labels
and specimens

c. Neatness of lettering:

d. Condition of specimens:

e. Display box:

6. Comments on incorrect identification:

7. Comments on member presentation:

8. Additional comments:

ENTOMOLOGY COLLECTION EVALUATION

Class Category entered
4-H Member Name
Club Years in Entomology

REQUIREMENTS:

Classes: Adult Species Orders I.D. Method

Basic Entomology I 25 8 common
Basic Entomology II 50 11 common
Basic Entomology III 100 14 common and family name
Basic Entomology IV 150 16 common and family name
Basic Entomology V 200 16 common and family name

TOTALS

I. BASIC REQUIREMENTS (20 pts. possible)

II. IDENTIFICATION ACCURACY (30 pts. possible)
- order identification (10 pts.)
- common name and/or family/species identification (20 pts.)

III. MOUNTING OF SPECIMENS (10 pts. possible)
- pinning and pointing technique (5 pts)
- wing spreading (5 pts.)

V. COLLECTION ARRANGEMENT (10 pts. possible)
- condition and alignment of specimens (5 pts.)
- display box and overall neatness (5 pts.)

IV. MEMBER PRESENTATION (20 pts. possible)
- Members when presenting projects to the judge shall be neat and clean in appearance.
- The member will also be evaluated on his/her communication of project knowledge and enthusiasm during his/her interview with the judge.

REFERENCES:

- 4-H Entomology Members Manual 131.2 A
- 4-H 210 A
- 4-H Entomology Record and Report 231.2
- Entomology Identification Labels 431.2
- Entomology Class and Order Labels 431.2A

- 4-H Entomology Newsletter-published quarterly. contact 4-H office to have your name added.
- Entomology Project Resource Guide (no number). This guide is an excellent source for films, 4-H Publications, Entomology Societies, Reference Books, Biological Supply Houses, Entomology Specialists and Volunteers in various counties. This resource guide should be a must for every Entomology Volunteer.
- 4-H Members Manual #1, 2,and 3
- 4-H Entomology Leader Manual
- Insect Notes Series (Michigan Entomological Society)...see Reference Guide
- Adventures with Insects by Richard Headstrom
- A field Guide to the Insects by Richard Headstrom
- Butterflies and Moths, A Golden Guide by Robert Mitchell and Herbert S. Zim
- Insects, A Golden Guide by Herbert Zim
- Life on A little-known Planet, by Howard Ensign Evans
- Stokes Nature Guide, A guide to Observing Insect Lives, by Donald W. Stokes
- The Audubon Society Field Guide to North American Insects and Spiders, by Lorus and Margery Milne
- The Audubon Society Field Guide to North American Insects and Spiders, by Lorus and Margery Milne
- The Audubon Society Field Guide to North American Butterflies, by Robert Pyle
- World Book Encyclopedia...sections on Insects, Classifications,
- Scientific and Scientific Method